MISSISSIPPI CRIME LABORATORY

ASCLD/LAB Accredited since 2003

Lab Case #: 14-020683-0002

TOXICOLOGY Report

Main Laboratory
1700 E. WOODROW WILSON AVE.
JACKSON, MS 39216
601-987-1600
FAX: 601-987-1615

December 03, 2014

CMEI Allen Collins
NESHOBA COUNTY CMEI
10211 Rd. 153
Philadelphia, MS 39350
REFERENCE- Agency Case # 14-1235

VICTIM: Michael Deangelo McDougle

REQUEST FOR ANALYSIS

On 11/3/2014 it was requested that the TOXICOLOGY section perform the following analysis: Drug Screen - Other. This examination was completed on 12/3/2014.

EVIDENCE

On 11/3/2014 at 10:12 AM, Forensic Scientist Phillip Bridges received the following evidence from the MS STATE MEDICAL EXAMINER via Dennis Sanders:

Evidence Submission 001	One sealed plastic bag labeled "McDougle, Michael D." containing various biological specimens.

DRUG CONFIRMATION RESULTS

Submission #: 001

See below

Submission #001 was submitted to NMS Labs for analysis. A copy of the NMS report will be attached.

REMARKS

Some of the items submitted in this case were not analyzed for drugs.

CONT'D:

CERTIFIED REPORT

EXHIBIT
tabbies
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Case Analyst:

Shan Hales

Shan Hales, D-ABC, DFTCB
Section Chief - Toxicology

Technical Reviewer:

Maury Phillips

Maury Phillips
Sec. Chief - Implied Consent

CC:

iResults DA - 08th Judicial District

MP

This report represents the analytical results of the examinations performed on the items of evidence in this case. It should be noted that this report does not represent all documentary items contained in the master file. Should additional material be required for court purposes, please contact the laboratory as soon as possible.

CERTIFIED REPORT

All samples submitted for toxicological examination will be routinely disposed of six months after analyses are completed. If you anticipate that this evidence will be needed, please contact the laboratory to arrange for its return.

NMS LABS

NMS Labs
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Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

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Toxicology Report

Report Issued 11/18/2014 12:02

To: **10109**
Mississippi State Medical Examiner Office
Attn: Sam Howell
1700 E. Woodrow Wilson
Jackson, MS 39216

Patient Name	MCDOUGLE, MICHAEL D.
Patient ID	14-020683-001
Chain	11804172
Age Not Given	**DOB** Not Given
Gender	Not Given
Workorder	1428380AL

Positive Findings:

Compound	Result	Units	Matrix Source
Cotinine	Positive	ng/mL	001 - Subclavian Blood
Delta-9 THC	3.9	ng/mL	001 - Subclavian Blood
Delta-9 Carboxy THC	16	ng/mL	001 - Subclavian Blood
Benzoylecgonine	1200	ng/mL	001 - Subclavian Blood
Amphetamine	20	ng/mL	001 - Subclavian Blood
Methamphetamine	86	ng/mL	001 - Subclavian Blood

See Detailed Findings section for additional information

Testing Requested:

Analysis Code	Description
8052B	Postmortem Toxicology - Expanded, Blood (Forensic)
8756B	Bath Salts and Stimulants Designer Drugs - Expanded, Blood
9560B	Synthetic Cannabinoids Screen, Blood (Forensic)

Specimens Received:

ID	Tube/Container	Volume/ Mass	Collection Date/Time	Matrix Source	Miscellaneous Information
001	Gray Top Tube	8.75 mL	Not Given	Subclavian Blood	
002	Gray Top Tube	8.75 mL	Not Given	Subclavian Blood	
003	Gray Top Tube	8.75 mL	Not Given	Subclavian Blood	
004	Gray Top Tube	8.75 mL	Not Given	Subclavian Blood	
005	Red Top Tube	6 mL	Not Given	Vitreous Fluid	
006	Red Top Tube	9 mL	Not Given	Bile	
007	Blue Plastic Container	40 mL	Not Given	Urine	

All sample volumes/weights are approximations.

Specimens received on 11/06/2014.

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Workorder 14283086
Chain 11804172
Patient ID 14-020683-001

Detailed Findings:

Analysis and Comments	Result	Units	Rpt. Limit	Specimen Source	Analysis By
Cotinine	Positive	ng/mL	1000	001 - Subclavian Blood	LC/TOF-MS
Delta-9 THC	3.9	ng/mL	1.0	001 - Subclavian Blood	GC-GC-GC/MS
Delta-9 Carboxy THC	15	ng/mL	5.0	001 - Subclavian Blood	GC-GC-GC/MS
Benzoylecgonine	1200	ng/mL	50	001 - Subclavian Blood	GC/MS
Amphetamine	20	ng/mL	5.0	001 - Subclavian Blood	LC-MS/MS
Identification and quantification were confirmed by a second LC-MS/MS analysis.					
Methamphetamine	86	ng/mL	5.0	001 - Subclavian Blood	LC-MS/MS
Identification and quantification were confirmed by a second LC-MS/MS analysis.					

Other than the above findings, examination of the specimen(s) submitted did not reveal any positive findings of toxicological significance by procedures outlined in the accompanying Analysis Summary.

Reference Comments:

1. Amphetamine (Benzphetamine Metabolite) - Subclavian Blood:

   Amphetamine (Adderall, Dexedrine) is a Schedule II phenethylamine CNS-stimulant. It is used therapeutically in the treatment of narcolepsy and obesity and also in the treatment of hyperactivity in children. Amphetamine has a high potential for abuse. When used in therapy, initial doses should be small and increased gradually. In the treatment of narcolepsy, amphetamine is administered in daily divided doses of 5 to 60 mg. For obesity and children with attention deficits, usual dosage is 5 or 10 mg daily.

   Following a single oral dose of 10 mg amphetamine sulfate, a reported peak blood concentration of 40 ng/mL was reached at 2 hr. Following a single 30 mg dose to adults, an average peak plasma level of 100 ng/mL was reported at 2.5 hr. A steady-state blood level of 2000 - 3000 ng/mL was reported in an addict who consumed approximately 1000 mg daily.

   Overdose with amphetamine can produce restlessness, hyperthermia, convulsions, hallucinations, respiratory and/or cardiac failure. Reported blood concentrations in amphetamine-related fatalities ranged from 500 - 41000 ng/mL (mean, 9000 ng/mL). Amphetamine is also a metabolite of methamphetamine, benzphetamine and selegiline.

2. Benzoylecgonine (Cocaine Degradation Product) - Subclavian Blood:

   Benzoylecgonine is an inactive metabolite and chemical breakdown product of cocaine. Cocaine is a DEA Schedule II controlled central nervous stimulant drug. Effects following cocaine use can include euphoria, excitement, restlessness, risk taking, sleep disturbance, and aggression. A period of mental and physical fatigue and somnolence follow the use of cocaine after the excitant-stimulant effects wear off. Benzoylecgonine has a half-life of 6 to 10 hours. The average blood benzoylecgonine concentration in 908 impaired drivers was 1260 ng/mL (range 5 - 17600 ng/mL). Benzoylecgonine blood concentrations in patients admitted to an emergency room for cocaine related medical complaints were 1280 ng/mL (SD = 1290 ng/mL). Benzoylecgonine concentrations in plasma following oral administration of 2 g/day of cocaine over 6 days, averaged 4900 ng/mL. The average blood benzoylecgonine concentration in 37 cocaine related fatalities was 7900 ng/mL (range 700 - 31000 ng/mL).

3. Cotinine (Nicotine Metabolite) - Subclavian Blood:

   Cotinine is a metabolite of nicotine and may be encountered in the fluids and tissues of an individual as a result of tobacco exposure.

   Anabasine is a natural product occurring in tobacco, but not in pharmaceutical nicotine and a separate test for anabasine in urine can be used to distinguish tobacco from pharmaceutical nicotine use.

   The reported qualitative result for this substance was based upon a single analysis only. If confirmation testing is required please contact the laboratory.

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Workorder 14283086
Chain 11804172.
Patient ID 14-020683-001

Reference Comments:

4. Delta-9 Carboxy THC (Inactive Metabolite) - Subclavian Blood:

   Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

   Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC with peak concentrations attained 32 to 240 minutes after smoking and may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users. THCC is usually not detectable after passive inhalation.

5. Delta-9 THC (Active Ingredient of Marijuana) - Subclavian Blood:

   Marijuana is a DEA Schedule I hallucinogen. Pharmacologically, it has depressant and reality distorting effects. Collectively, the chemical compounds that comprise marijuana are known as Cannabinoids.

   Delta-9-THC is the principle psychoactive ingredient of marijuana/hashish. It rapidly leaves the blood, even during smoking, falling to below detectable levels within several hours. THC concentrations in blood are usually about one-half that of serum/plasma concentrations. The active metabolite, 11-hydroxy-THC, may also fall below detectable levels shortly after inhalation. Delta-9-carboxy-THC (THCC) is the inactive metabolite of THC with peak concentrations attained 32 to 240 minutes after smoking and may be detected for up to one day or more in blood. Both delta-9-THC and THCC may be present substantially longer in chronic users.

   Reported usual peak THC concentrations in serum after smoking 1.75% or 3.55% THC marijuana cigarettes are 50 - 270 ng/mL after beginning of smoking, decreasing to less than 5 ng/mL by 2 hrs. Corresponding delta-9-carboxy-THC concentrations range from 10 - 101 ng/mL about 32 to 240 minutes after the beginning of smoking and decline slowly. Passive inhalation of marijuana smoke has been reported to produce blood THC concentrations up to 2 ng/mL. Delta-9-carboxy THC concentrations in blood may not be present following passive inhalation of marijuana smoke.

6. Methamphetamine (Benzphetamine Metabolite) - Subclavian Blood:

   d-methamphetamine is a DEA schedule II stimulant drug capable of causing hallucinations, aggressive behavior and irrational reactions. Chemically, there are two forms (isomers) of methamphetamine: l- and d-methamphetamine. The l-isomer is used in non-prescription inhalers as a decongestant and has weak CNS-stimulatory activity. The d-isomer has been used therapeutically as an anorexigenic agent in the treatment of obesity and has potent CNS-, cardiac- and circulatory-stimulatory activity. Amphetamine and norephedrine (phenylpropanolamine) are metabolites of methamphetamine. d-methamphetamine is an abused substance because of its stimulatory effects and is also addictive.

   A peak blood concentration of methamphetamine of 20 ng/mL was reported at 2.6 hr after an oral dosage of 12.5 mg. Blood levels of 200 - 600 ng/mL have been reported in methamphetamine abusers who exhibited violent and irrational behavior. High doses of methamphetamine can also elicit restlessness, confusion, hallucinations, circulatory collapse and convulsions.

   *In this case, the level of methamphetamine determined has not been differentiated according to its isomeric forms. Differentiation of the isomers of methamphetamine is available upon request.

Unless alternate arrangements are made by you, the remainder of the submitted specimens will be discarded six (6) months from the date of this report; and generated data will be discarded five (5) years from the date the analyses were performed.

Workorder 14283086 was electronically signed on 11/18/2014 11:03 by:

Edward J. Barbieri, Ph.D.
Forensic Toxicologist

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Workorder 14283086
Chain 11804172
Patient ID 14-020683-001

Analysis Summary and Reporting Limits:

All of the following tests were performed for this case. For each test, the compounds listed were included in the scope. The Reporting Limit listed for each compound represents the lowest concentration of the compound that will be reported as being positive. If the compound is listed as None Detected, it is not present above the Reporting Limit. Please refer to the Positive Findings section of the report for those compounds that were identified as being present.

Acode 50013B - Cannabinoids Confirmation, Blood (Forensic) - Subclavian Blood

-Analysis by Multi-dimensional Gas Chromatography/Mass Spectrometry (GC-GC-GC/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
11-Hydroxy Delta-9 THC	5.0 ng/mL	Delta-9 THC	1.0 ng/mL
Delta-9 Carboxy THC	5.0 ng/mL		

Acode 50014B - Cocaine and Metabolites Confirmation, Blood (Forensic) - Subclavian Blood

-Analysis by Gas Chromatography/Mass Spectrometry (GC/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Benzoylecgonine	60 ng/mL	Cocaine	20 ng/mL
Cocaethylene	20 ng/mL		

Acode 52370B - Amphetamines Confirmation, Blood - Subclavian Blood

-Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Amphetamine	5.0 ng/mL	MDEA	10 ng/mL
MDA	5.0 ng/mL	Methamphetamine	5.0 ng/mL

Acode 52409B - Amphetamines Confirmation, Blood (Forensic) - Subclavian Blood

-Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Amphetamine	5.0 ng/mL	Phendimetrazine	10 ng/mL
Ephedrine	5.0 ng/mL	Phenmetrazine	5.0 ng/mL
MDA	5.0 ng/mL	Phentermine	10 ng/mL
MDEA	10 ng/mL	Phenylpropanolamine	5.0 ng/mL
Methamphetamine	5.0 ng/mL	Pseudoephedrine	5.0 ng/mL
Norpseudoephedrine	5.0 ng/mL		

Acode 8052B - Postmortem Toxicology - Expanded, Blood (Forensic) - Subclavian Blood

-Analysis by Enzyme-Linked Immunosorbent Assay (ELISA) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Barbiturates	0.040 mcg/mL	Salicylates	120 mcg/mL
Cannabinoids	10 ng/mL		

-Analysis by Headspace Gas Chromatography (GC) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
Acetone	5.0 mg/dL	Isopropanol	5.0 mg/dL
Ethanol	10 mg/dL	Methanol	5.0 mg/dL

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Workorder 14283086
Chain 11804172
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Analysis Summary and Reporting Limits:

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hypnosedatives, Hypoglycemics, Muscle Relaxants, Non Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

Acode 8756B - Bath Salts and Stimulants Designer Drugs - Expanded, Blood - Subclavian Blood

-Analysis by High Performance Liquid Chromatography/Time of Flight-Mass Spectrometry (LC/TOF-MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
2C-B	10 ng/mL	Flephedrone	10 ng/mL
2C-C	10 ng/mL	MBZP	10 ng/mL
2C-E	10 ng/mL	MDA	10 ng/mL
2C-H	10 ng/mL	MDEA	10 ng/mL
2C-I	10 ng/mL	MDMA	10 ng/mL
2C-N	10 ng/mL	MDPV	10 ng/mL
2C-P	10 ng/mL	Mephedrone	10 ng/mL
2C-T-2	10 ng/mL	Methamphetamine	10 ng/mL
2C-T-7	10 ng/mL	Methcathinone	10 ng/mL
3,4-DMMC	10 ng/mL	Methedrone	10 ng/mL
3-FMC	10 ng/mL	Methoxetamine	2.0 ng/mL
4-MEC	10 ng/mL	Methylone	10 ng/mL
7-Hydroxymitragynine	10 ng/mL	Mitragynine	10 ng/mL
Amphetamine	10 ng/mL	Naphyrone	10 ng/mL
BZP	10 ng/mL	O-Desmethyltramadol	10 ng/mL
Buphedrone	10 ng/mL	PMA	10 ng/mL
Butylone	10 ng/mL	Pentedrone	2.0 ng/mL
Cathinone	10 ng/mL	Pentylone	10 ng/mL
DBZP	10 ng/mL	Phenazepam	10 ng/mL
DMAA	50 ng/mL	Pyrovalerone	10 ng/mL
DOB	10 ng/mL	TFMPP	10 ng/mL
DOM	10 ng/mL	alpha-PVP	2.0 ng/mL
Ethylone	10 ng/mL	mCPP	10 ng/mL

Acode 9560B - Synthetic Cannabinoids Screen, Blood (Forensic) - Subclavian Blood

-Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS) for:

Compound	Rpt. Limit	Compound	Rpt. Limit
A-796260	0.10 ng/mL	JWH-019	0.10 ng/mL
AM-1248	0.10 ng/mL	JWH-022	0.10 ng/mL
AM-2201	0.10 ng/mL	JWH-073	0.10 ng/mL
AM-2233	0.10 ng/mL	JWH-081	0.10 ng/mL
AM-694	0.10 ng/mL	JWH-122	0.20 ng/mL
JWH-018	0.10 ng/mL	JWH-200	0.10 ng/mL
JWH-018 5-chloropentyl	0.10 ng/mL	JWH-203	0.10 ng/mL

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Workorder 14283086
Chain 11804172
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Analysis Summary and Reporting Limits:

Compound	Rpt. Limit	Compound	Rpt. Limit
JWH-210	0.20 ng/mL	RCS-8	0.10 ng/mL
JWH-250	0.10 ng/mL	UR-144	0.20 ng/mL
RCS-4	0.10 ng/mL	XLR-11	0.10 ng/mL